

## 4 Comparison with Gulf Intracoastal Waterway Data

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### Field Data Description

Zhang et al (1993) conducted measurements of return velocity and drawdown on the Gulf Intracoastal Waterway (GIWW) at the Aransas National Wildlife Refuge. Only loaded vessels were used in the comparison because it is not known whether to use the beam, draft, and length of the unloaded barges or the towboat which will often have a larger cross-sectional area but of much less length. Because the data were presented in dimensionless ratios that were not always consistent, required input for the NAVEFF model could only be determined for 6 of the 10 loaded tows as shown in Table 4. All data were taken at site two and all tows were assumed to travel down the center of the channel.

### Results

Observed versus computed return velocity and drawdown are shown in Table 4. Scatterplots of observed versus computed return velocity and drawdown are shown in Figures 21 and 22, respectively. MRE and MTE for return velocity are 0.36 and 0.25, respectively. MRE and MTE for drawdown are 0.32 and -0.23, respectively.